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DROPSY OF THE AMNION.

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Cazeaux lies before me as I write, and I quote from his article "Dropsy of the Amnion," (Edition of 1866, page 311): "In the present state of our science it would be absolutely impossible to designate the cause of this singular affection, although some facts seem to militate in favor of its being produced by an inflammation of the amnion; but this opinion requires further confirmation to be received without hesitation, for, notwithstanding Dr. Mercier claims to have seen the internal surface of the amnion covered several times by false membranes, and the membrane itself highly injected, yet other observers have not detected anything of the kind." (*Jour. Gen. de Med.*, tom. xiv).

The latter portion of this paragraph seems clearly to express the opinions of the author just quoted, and it also gives us the opinions of others in reference to the still uncertain pathology of this disease. But in this controversy I shall take sides with Mercier. On Sunday, August 14th inst., I was called in the country about four miles to visit Mrs. M., whom I had attended in several former labors. Her age was 39. I found her holding to a post of the bed, as she stood upon the floor, during a pain. I noticed her abdomen was enormously and painfully distended. I asked her to lie down, but she could not do so, as she said, on account of the smothering. She had always to be propped nearly upright on her bed to secure any rest or sleep at all. So for the present she remained standing, only taking a chair near by, during the intervals of pain. These were extremely feeble. Presently during one of these efforts at contraction the cyst was ruptured, and a large quantity of water, at least a gallon, deluged the floor. She was now placed upon the bed, the feathers having been previously removed by my directions. I examined her now for the first time. The os was found sufficiently dilated, had the pains been efficient, to have given exit to the child; head presenting; abdomen still very much distended, and larger than it should be at term. I raised the head several times, at proper intervals, in order to effect the escape of the large quantity of water, each pain discharging more and more until all, or nearly all, had escaped. A large wooden bucket was placed under the bed for the purpose, and two gallons and a half were collected. This quantity, added to that on the floor and saturating the bed, could have amounted to a total of not less than four gallons or *thirty-two pints*. The water I observed in this little sea upon the floor was clear, limpid and flocculent, exhibiting numerous flakes of coagulated albumen, light and feathery, as they were gently wafted by the breeze coming through an open door. Variable quantities of water have been reported as having been seen in this disease; even more than that which I have reported. Fifty pints are said to have been collected. Baudelocque, I believe, reports thirty-two pints, the quantity seen by me. The waters having all, or nearly all escaped, the abdomen of my patient assumed a proper size, and the labor went on. The pains now became powerfully propulsive, and in about thirty minutes a *dead* fœtus was expelled. The forehead escaped under the arch. I used no ergot, having this time none in my case. I do not suppose it would have accomplished the rupture of the cyst any sooner, as it would not likely have the power to affect a uterus so distended. The *quickening* was at

no time, as the patient informed me, very perceptible. She felt no motion, only twice; and the last time about ten days before delivery; about which time I suppose the fœtus ceased to be viable.

After bestowing the usual attentions to my patient; carefully conducting the expulsion of the placenta and the membranes entire; and securing the subsidence of the uterine globe to its proper size and position in the pelvic chamber, I now proceeded with the *autopsy* of the fœtus. Its weight was unusually light, being but 4 lbs. and 8 oz., avoirdupois; its length was scant 15 inches. An arrest of development in the cranial bones of this fœtus was remarkably apparent. The *parietal* bones were separated by at least half an inch, throughout the whole tract of the *sagittal* suture, from the superior angle of the occiput to the root of the nose; the bony arrest extending through the os frontis, exhibiting instead of the normal suture a deep bluish depression. Instead of forming the *lambdoidal* suture, the deltoid edges of the occipital bone overstrode those of the parietal. The occipital bone was very much flattened on its convexity, giving to the back of the head a singularly strange and perpendicular appearance. The back of the fœtus over the cervical and dorsal regions was considerably edematous, pitting under the finger. Several large watery cysts, the size of an almond and larger, occupied the neck and top of the shoulders. A similar cyst occupied the back part of each elbow-joint; whence, I concluded that the dropsy of the amnion was extended to the fœtus. The knee and elbow joints were flexible as usual; but the tarsal articulations were immovably fixed or *anchylosed* admitting of no motion of the ankles. Both feet were clubbed; the right foot distorted downward and inward, and the left in a contrary direction, upward and outward. The carpal joints also were fixed and immovable. The left carpal bones were *in situ*; but the right were opposed and firmly fixed to the inside end of the radius. The ulna projected into view. The thumb was webbed with the integuments of the forearm, and the hand pointed across the chest. The shoulder joints were unaffected. The lower jaw was anchylosed, admitting of only a very slight depression of the chin. The red, fleshy, button-like protuberance on the end of the ulna, and which I omitted to mention in its proper place, gave the articulation a strange appearance. This fœtus taken as a whole—diminutive, dropsied, and deformed, was a striking illustration of this dropsy in its effects in arresting fœtal developement. I have been thus minute in its description, for the reason, that I shall have occasion to refer to it, as I progress with the study of this strange disease.

Remembering the unsettled dispute among writers on this disease, as to its etiology and pathology, I had made up my mind to give the placenta and amniotic cyst a very careful inspection, after I had seen my patient comfortable. Accordingly, as is my constant custom, I received the placenta in my hands, and carefully twisting the membranes into a cord, by twirling the placenta over and over, to avoid leaving any shreds in the cavity of the uterus, which accident I have seen followed by a good deal of pain and hemorrhage. I now carried the vessel containing my prize into the back yard, where I might have the best light, in which to conduct the autopsy. At my request two intelligent lady witnesses went with me, for I wanted witnesses, and these were competent, for they had themselves been present and officiated in many deliveries, and the older lady in hundreds. I informed them of the dispute among the doctors concerning this disease, in order to invest my proceedings with some degree of common sense. I now carefully unfolded the membranes, and holding them up in a good light, I was inexpressibly delighted to find that Dr. MERCIER had told the truth, notwithstanding CAZEAUX had, in the quotation at the beginning of this article so nearly called in question his veracity. The inner surface of this amnion was traversed by numerous red lines, longitudinally arranged, from one to six inches in length, and about the size of a common sewing thread. They were generally straight and not observed to branch. I broke one of the largest with my finger nail and observed a dark-colored blood. Scattered over the surface of the membrane, I also observed detached patches of a fine capillary net-work of vessels of lighter tint, and rendering, when held in the light, a most beautiful and variegated rose-colored surface, in the interspaces between which, the membrane presented no unusual appearance. The cord was a beautiful necklace, stranded with cysts of pearl. The placenta was diminutive, contrary to what has been stated by BUNSEN and KILL. A placenta aborted at the sixth month, says Kill, was a third larger in circumference.

The placenta in my case, however, did not measure more than half as thick as an ordinary placenta generally is. The tissue was consolidated and firm, but no external traces of plastic lymph were observed. Still I must regard the consolidation of tissue as due to *placentitis*. Dr. BYFORD, of Chicago is the only writer that I know of, who has systematically spoken of placentitis as a disease *sui generis;* considering that it always exists as a cause of adherent placenta. He omits to state that it may exist without attachment. I know it does. At least I will say, that it is always so attached; the unassisted efforts of the uterus may detach it. I had no trouble in delivering this placenta. In the case reported by Dr. CORY, the placenta was adherent; while Dr. LIEBMAN, unfortunately, says nothing about it. I was as particular as it was possible for me to be, under the circumstances; for I had no instrument with me, not even a gum lancet. The next day on a return visit, I thought I would unearth the placenta and re-examine it; but to my great disappointment, it had been long since thrown behind a wood fire among the ashes. I now considered that the pathology of this disease was only to be sought for in the evidences revealed by the anatomical developments that might be found in the placenta and the fœtal membranes.

From what I myself observed, in this careful autopsy of the intra-uterine contents, I think it may be conclusively and pathologically deducted that, dropsy of the amnion, now in process of investigation, is emphatically a disease of the fœtus and its organs of connection with the mother; that it is furthermore, a disease *sui generis*, resulting from some morbid condition of the embryonic structures, and is especially due to "a highly injected state of the membrane itself," as seen by Dr. Mercier, and if by no other living witness, at least, by myself, who am endeavoring to establish a true pathology for this important disease. In support of what I now feel warranted in asserting, namely, that amniotic dropsy is *always* the result of *inflammation* of the amnion itself, in contradistinction to the *endosmic* or *ehalent* theory, as espoused by Cazeaux, if not all other authors, I shall appeal *first* to the evidences afforded by the embryonic appendages or organs of connection; *secondly*, in support thereof, to the evidences afforded by the fœtus itself:

1st. That dropsy of the amnion is always the result of *inflammation* of the amnion itself, I shall in confirmation of this, directly approach the evidences afforded by the anatomical characters of this membrane. Cazeaux himself shall bear witness, page 202, that, "The most internal membrane of the ovum, or the amnion, is formed by the inner lamina of the fold, or the cephalic and caudal hoods which constituted the external *serous* layer of the blastoderm surrounding the embryo." This is of itself a sufficient acknowledgment of the *fact* that, the amnion, anatomically considered, is identical in structure with that of a serous membrane. The serous structure of the amnion being thus admitted, we extract from Wilson's human anatomy, page 501: "Serous membrane consists of two layers, an external or areolo-fibrous layer, and an internal layer or epithelium. The *areolo-fibrous layer* upon its outer surface is rough and vascular, and adherent to surrounding structures; but on its inner or free surface is dense and smooth, and deficient of vessels. The smooth and brilliant surface of serous membrane is due to a distinct epithelium, composed of laminæ of cells, and flattened polyhedral scales with central nuclei. Henlé has also observed this structure, which may be demonstrated with a good microscope, on the surface of all the serous membranes of the body, upon the surface of the living membrane of arteries and veins, and on synovial membranes."

The amnion then, no matter whether any vessels have been demonstrated in it or not, in its normal condition, is certainly capable, under peculiar circumstances, of assuming for itself specific and vitalized organization. Composed, as it essentially is, of epithelial or cell-pressed tissue, with central nuclei, it possesses within itself all the essential elements of an organizable and living structure. Is not this original cell-germ, inclosing its central nuclei, the primeval, elementary source of all created animal life? Is it not regarded, in the present advanced state of our science, by all enlightened physiologists, as being capable within and of itself of assuming a high degree of vitality? Does it not create from its own resources the most delicate vessels in whose walls is urged on and on the everflowing tide of life? Has not an allwise Creator himself endowed this primitive cell-germ with the great mystery of mysteries, the inscrutable

and infinite power of reproduction? Finally, is not man himself spoken into existence in the image of his Creator, from a mere nucleus, inclosed in one of these primitive cell-germs? Such is human life, and such the inscrutable power, that is ever peopling and re-peopling the earth with its teeming millions.

But, in addition to this reproductive power, as possessed by an original isolated cell germ, it assumes for itself a secondary vital power by association, as it were, or by compression into a concatenated series of juxtaposed cells. This concatenated, cell-compressed tissue constitutes the anatomical mechanism of the amniotic membrane, as well as that epithelial tissue found on the internal surface of all the serous membranes of the body. The fluids by which these surfaces are lubricated is a secretion, *sui generis*, and not a mere process of transudation or endosmosis, as Cazeaux has declared to be the manner of collecting the liquor amnii. I do not think that these little holes in the amnion, through which Cazeaux strains the liquor amnii, has ever been demonstrated to have any existence. This theory may certainly be accepted as the easiest, but it evidently cannot be proven, as the anatomo-physiological method by which the liquor amnii is afforded. The anatomical characters of this membrane, and of the secreting epithelial tissue of serous membranes have been alike demonstrated to possess no vessels. Then, why may it not be philosophically and logically contended that the lubricating secretion of all serous or synovial membranes is exhaled from these structures, in the same way that it is supposed to be strained through little holes or openings in the structure of the amniotic membrane? But all anatomists declare the lubricating liquid of serous surfaces to be a vital secretion, not an exhalation.

I hope I may not be accused of wantonly extracting from Cazeaux if I thereby become the more able to demonstrate that for which I am now contending, namely, that the liquor amnii is a secretion, *sui generis*, furnished from the amnion, as like secretions are derived from all other serous membranes. I am compelled to differ honestly, yet earnestly, from what I conceive to be the erroneous opinions of this almost uniformily accomplished, and correct scholar. Besides, he is the only author in my office who so fully treats of the origin of this disease, or who so minutely describes the anatomical characters of the membrane from which it is derived. I must be permitted, then, to introduce what he says in reference to the disease now in process of investigation. On page 202 he says: "The amnion undergoes no important change during the ulterior development of the ovum; nor does its texture. Of course, it would be more firm and consistent, acquiring by time a greater resemblance to the serous membranes, although it neither incloses nor possesses vessels at any period." Here he has exactly developed the anatomical characters of the membrane; but he as suddenly drops and spoils it all, by introducing in the very next sentence the dubious testimony of another obstetrical author: "Nevertheless, says Dugés, it probably has some openings which permit the waters exhaled by the uterine capillaries, and received by the vessels of the decidua, and villi of the chorion to be diffused around the fœtus; but this perspiration of the liquids secreted by the internal uterine surface, may very possibly be a simple phenomenon of endosmosis." Here then at last is the initial theory of what has been called endosmosis or vital imbibition. Cazeaux first very correctly gives us the anatomy of the amnion, but upon finding no holes in its structure, it was necessary to allow Dugés to complete the final arrangements by only saying, "It probaby has some openings." I will only say again, it has never been demonstrated, I think, by microscopical anatomy that any such openings exist.

From its analogy to that of surfaces known to secrete a lubricating fluid I am forced to conclude that the amnion is also a secreting membrane; that at first its secretion affords but little else than a lubricating oily material, and without which the vital organization of the membrane could not be maintained; and afterwards increasing very gradually in quantity, *pari passu*, as the development of the fœtus advances, and as the necessities of its nutrition and defense from harm requires. It will be remembered also, that secreting surfaces, constructed anatomically, perfectly identical, yield very variable products as to quantity and quality, even as used for purposes of lubrication, to say nothing of differences as resultant of disease; and that the serous surfaces, as a consequence, have been divided by anatomists into two classes, each class eliminating in health or disease a different proportion of albumen. The arachnoid, pericardium, pleura, peritoneum all pour out a small proportion of

albumen; while the tunica vaginalis, synovial membranes, and bursæ pour out a much larger proportion of this coagulable material. The liquor amnii, a serous product secreted by the amnios, contains the very smallest proportion of albuminous matter of any other secretion. This fact, however, can afford the transudationists no logical argument, as to its mere excess constituting it a dropsy; for, in that case, it can only be regarded, at the farthest, a vitiated secretion, a very different thing from amniotic dropsy. Vital imbibition on which their theory is built, must be a sagaciously instinctive process to absorb so little albumen from the blood, where it so abundantly exists. Thus have I demonstrated, anatomically, that hydrops amnii or dropsy of the amnion is always the result of inflammation of the membrane concerned; and at the same time have deducted physiological evidence from the analogical likeness of this to all other serous membranes that the liquor amnii is a secretion proper of the membrane itself.

2d. As before marked out, for the further support of the inflammatory origin of this disease, I shall appeal to the evidences presented by the fœtus itself. I have already spoken as to an inflammatory action having, from some cause, seized upon the fœtus and its appendages or organs of connexion with the mother; and have already mentioned the consolidation of the placenta, in support of this opinion. The induration or hepatization of the placental mass is exactly the analogue of what does occur in the parenchyma of the lungs, in the stroma of the ovary, and in the structure of the liver. But, as to the fœtus itself, we have a very strong anatomical proof in the fact that the amnion is itself an evident continuation of the "external serous layer of the blastoderm surrounding the ovum." Cazeaux further says, page 184: "During the progress of these phenomena, the external or serous layer of the blastoderm is raised in folds around its central portion, which has been developed into the embryo, and more especially so at the caudal and cephalic extremities." He also goes on to say: "These folds elongate rapidly, passing along the dorsal regions of the embryo, and ultimately come in contact with each other on the median line." This palpable connection of the amnion with the fœtus, a portion of it being "developed into the fœtus," is conclusive evidence, that it is continuous with the fœtal investments, and is subject to the same accidents or diseases while being in direct connection with the embryo, that is, to inflammation and consequent dropsical effusion. Besides the fœtus has often been known to be affected with dropsy while in utero; for I have seen a dead-born fœtus with hydrocephalus, and others with ascites; in one case in connection with a general dropsy of the mother, ascites and anasarca. The mother made a perfect recovery, and I have attended her once since, with no return of the disease, either to herself or child. But, in further support of the propagation of this morbid action to the fœtus, I will ask the reader to observe the large watery cysts upon the shoulders and neck of this fœtus, and back of the elbow joints. But more than this, I appeal to the cord as the strongest evidence of all. There were a large number of small cysts containing watery fluid, one of which I ruptured, as they were strung along the funis. From the known anatomical fact that the amnion forms the investment of the umbilical cord throughout its entire length, I think it can no longer be doubted, that the inflammation of the amnion was propagated by structural continuity to that portion of the membrane investing the umbilical cord. In further proof of the amniotic waters being a *secretio amnii* I shall append a chemico-vital analysis of the liquor amnii by Vauquelin, and extracted from Cazeaux, page 203. This analysis affords:

98.8 Water,
1.2 Albumen, hydrochlorate of soda, phosphate of lime and lime.

I am afraid that the best obstetrical authors are not always the best anatomists. The reason is perhaps to be found in the fact, that all such authors must invent a theory of some kind, in order to distinguish themselves. Listen to VELPEAU: "Everything proves that the liquor amnii is the result of a transudation or of a simple exhalation, like the serum of the pleura, pericardium, etc., and that this process requires no particular canals for its accomplishment, being a phenomenon of vital imbibition." Here it is again, and Velpeau has exhibited his anatomical skill in a very *dubious* manner; for in this account he has committed a most egregious blunder. Every anatomist and every anatomo-physiologist that I have ever read, defines the liquid on the inner surface of the pleura, pericardium, etc., to be a *secretion*. It is surprising indeed, that such scholars as Velpeau, Cazeaux, and Rams-

botham should adopt such a *dubious* theory, and more surprising still that American authors should follow their example. I think the time is at hand, when all such speculations as this, for the credit of obstetrical science, should be expunged from the works of obstetrical authors.

It will be seen from the foregoing analysis that the liquor amnii contains a very small proportion of albuminous matter and salts. This proves conclusively to my mind that it contributes but little to the nutrition of the fœtus, except in the early stages of gestation, when, I am inclined to think, without absolutely knowing that it contains a much larger proportion of albumen. But, as the development of the ovum advances and requires more and more for its nutrition, I think it now draws largely upon the utero-placental circulation. I think the proportion of albumen is much too small, from the analysis given, to afford anything like the appearance of the water which I examined in the case I am reporting. Deducting from 1.2. a reasonable allowance for the saline matter contained, the proportion of albumen necessarily falls on the decimal side of 1. But in the water that I saw, there were innumerable flakes of albumen floating or suspended in it, which of itself was sufficient evidence that the large quantity of water in this case could not have been an excessive secretion of the liquor amnii. It was evidence conclusive that the water which I saw must have been developed by some "morbid condition." The fluid of dropsy is not seen coagulated, unless a chemical re-agent has been in some way applied to it before it has escaped from the cyst in which it was confined. I think this appearance, as observed by me, may have been produced in either one of two ways: either by the elimination of an acid in the liquor amnii proper; or, as is equally probable, by the urine of the fœtus, having set free an acid which afterwards became suspended in the liquor amnii. For it must be remembered that this voidance of fœtal urine is regarded as essential to the preservation of fœtal life.

The urine of the fœtus contains several acids, either of which if disengaged, its base may give rise to coagulation of the albumen of the liquor amnii, or of the dropsy of the cyst however produced. I have no manner of doubt dropsy may in this way be developed, by the irritating presence of a free acid, which thus becomes the exciting cause of inflammation of the amniotic membrane. This I can not regard as at all improbable. The urine may disengage any of these combined acids, as the uric, benzoic, acetic, fluoric, rosiac, lactic, muriatic, or sulphuric acids, which may thereby morbidly impress the membrane, and thus become the actual exciting cause of the inflammation. Particularly, do I think that this may be the result, in the early stages of pregnancy. This may seem to militate against the assertion I have seen in some authors, that the dropsy in question does not occur before the sixth month. But this assertion, as we go along, will be shown to be incorrect. But I am not pointing out this or any other exciting cause in the case I am reviewing. I only mention the elimination of a free acid as one probable cause. But, in order still a little further, and also the more clearly to demonstrate that the liquor amnii, even when in excess, is a secretion *sui generis;* and also to show that it can in no sense, or by any chemical test, be made to develop the characters of a true dropsy, which depends exclusively on a certain proportion of albumen, and which proportion the liquor amnii does not possess; I ask leave to present the chemical analysis of the several forms of dropsy, and also of the serum of the blood, from which the dropsies are derived. The table is from Dr. MARCET:

	Average Specific Gravity.	Solid Constituents. Grains.	Animal Matter. Grains.	Saline Matter. Grains.
Fluid Spina Bifida	1007.	14.4.	2.2.	9.2.
Hydrocephalus	1006.7.	9.2.	1.12.	8.08.
Ascites	1015.	33.5.	25.1.	8.4.
Ovarian Dropsy	1020.			8.0.
Hydrothorax	1012.1.	26.6.	18.8.	7.8.
Hydrops Pericardii	1014.3.	33.0.	25.5.	7.5.
Hydrocele	1026.6.	80.0.	71.5.	8.5.
Blister	1024.1.			8.1.
Serum of Blood	1029.5.	100.0.	90.8.	9.2.

In this table, the albuminous matter of these several forms of dropsy is shown in the column headed "animal matter." The quantity greatly varies in proportion. In the dropsies of the upper cavities of the body the *smallest* proportion of coagulable material is developed, while in those of the lower parts of the body the *largest* proportion of albumen is shown to exist. Assuming now abdominal dropsy as the standard of development, it will be seen from the analysis of the amniotic fluid already given by Vauquelin, that the proportion of albumen is too insignificant to respond to a chemical

test, with any such degree of albuminous evolution, as that which is known to exist in ascites. No matter by what excess the volume of the amniotic fluid may become increased, its chemical characters are always the same, and the proportion of albumen remains unchanged. Had the fluid I examined been only an excess of the liquor amnii, it could by no possibility have responded to any chemical test with such vigor, as to have developed the great number of albuminous flakes, which I saw in this accumulation with my own eyes. I am inclined to think, however, that when the fluid or serum of true amniotic dropsy shall be subjected to analysis, it will be found to develop a proportion of albumen equal to that existing in hydrocele. I conclude that such will be found to be the case from what I may call analogical probabilities. Hydrocele being a dropsy of the generative or reproductive apparatus; the amnion becoming accidentally inflamed, may by sympathetic contiguity, give rise to an accumulation containing a similar proportion of albumen, equal perhaps to that existing in hydrocele or dropsy of the tunica vaginalis testis. This contiguity of sympathy or sympathetic affinity may be fairly assumed from the fact that the liquor amnii possesses a spermatic odor. Adding to this now a similarity of structure, as evidently exists, I do not think it at all improbable that dropsy of the amnion will be found to develop, at least, a very large proportion of albumen. But, possessing as is shown already such a very small proportion of coagulable lymph, less than a decimal part of 1 in 100 parts of fluid. I repeat that a chemical test of no intensity can possibly develop such phenomena as those observed by me, as existing in the accumulation now under review. Thus have I attempted to demonstrate as far as the limits of such a paper admits, not only anatomically and physiologically, but vito-chemically; first, that the liquor amnii is a secretion *sui generis*, not demonstrable on the hypothesis of transudation; secondly, that a mere excess of volume by whatever amount, can in no sense constitute it a dropsy, unless a collection of water is so defined; and lastly, that its pathological etiology is directly traceable to *inflammation* or a "high degree of injection of the amniotic membrane itself."

Conceding the inflammatory origin of the disease, it will still be asked how is this inflammation produced, or how is it set up? I have already intimated that the parent cell, with enclosed nuclei, besides being endowed as capable of reproducing its like, the essential preliminary of all created animal life, possesses also the power of creating new substances or eliminating deposits of plastic lymph, which of themselves become quickly organized. The secreting surfaces of all serous membranes, and of the amnion also, are composed of a concatenated series of primary cells compressed, with flattened polyhedral scales and central nuclei. Thus constituted, these structures are known to anatomists as epithelial tissue. This is the tissue which eliminates the lubricating material of all serous and synovial structures. And this the tissue, too, which essentially constitutes the amnion, not an exhaling, but a secreting membrane.

This membraneous structure, the amnion *itself*, may become congested or inflamed, if not *primarily*, by creating a vascular tissue proper within its own structure; at least, *secondarily*, by precipitating a plastic product on its own internal surface, which secondary tissue becoming quickly organized with an infinitude of miniature vessels carrying red blood, may thus give rise to a serous effusion, *quantum sufficit*, to constitute a true dropsy. Pathological anatomy has developed the theory by which this plastic product is precipitated on serous surfaces, and also the process by which they become organized and living tissues. If I mistake not, Professor S. D. GROSS, in his brilliant treatise on pathological anatomy, which I read many years ago, treats of this mysterious subject very fully, when speaking of his heterologous and other transformations. This theory of the vital organization of these plastic products is very graphically and beautifully described by DUESBURY in his article (Transformations, Subdivision, Vascular Transformations, Cyclopedia of Practical Medicine, Vol. IV, page 465). "The next step after the disposition of lymph assuming a cellular structure, is the generation of blood vessels by which the part becomes organized; this generation of vessels being one of the most curious and important points in pathology, and being the offspring of nearly all the morbid products, deserves a more minute investigation." "If we examine, by the aid of a microscope, a clot of effused lymph, we observe, after a certain period, a series of continuous vesicles forming a kind of canal, or

a single canal itself, without any vesicular appearance. This is found, after a time, to contain a fluid which gradually assumes the characters of blood. The canal elongates at each extremity, and vessels are formed laterally, so as to give it the same disposition which we find in the trunk of the vena portæ and its hepatic and abdominal ramifications. The vessels, by their further development, at length inosculate with those of the parent or surrounding tissues. KALTENBRUNNER describes the latter vessels as becoming ruptured and projecting the globules of blood through the clot, and thus forming the canals of communication as observed in a part under inflammation." Thus then is developed, step by step, that mysterious process by which an amorphous or cellulo-plastic product becomes an organized and living tissue. This inscrutable process constitutes the primary step as beginning the development of the *ovum*, and which by continuous and consecutive processes finally constitutes the grand total of human life.

The membrane that envelops the human *ovum* is essentially one of these amorpho-homogeneous, and cell-pressed, plastic products, composed as it is, almost entirely of albumen, as it originally constitutes the blastodermic membrane that envelops the ovum; and essentially vital in its simple and structureless arrangement around the ovule; it becomes as it were a radiating surface, from which are eliminated all the life principles that sustain, nourish, and develop the ovum until it becomes attached to the mother's structures; and even then, not surrendering its officiousness, it serves the further purpose of furnishing a soft, lubricated envelope for the ovum, and as the development of the latter progresses, a copious secretion in which the fœtus securely floats, protected from all harm that otherwise might menace it from within and without. It is no argument to contend that amorphous or homogeneous structures, because originally devoid of vessels, they can never be possessed by them. Nor is it a logical deduction to assume that because a surface may not contain any demonstrable vessels, that they cannot afford a secretion. The epithelial tissue which composes the internal layer of all serous and synovial membranes are proven to be entirely destitute of vessels, and yet no anatomist will deny that they do furnish a secretion. Amorphous and plastic deposits certainly contain no vessels as first precipitated, yet after arranging its cells into a sort of filamentary canal the crimson tide is soon observed traversing it.

It is this absence of vessels in the amnion that has been the stumbling block of obstetrical writers. And yet, knowing that the large quantity of water inclosed within this cyst must in some way be accounted for, it was the easiest method to improvise innumerable little holes through which it might be strained. But to prevent it from straining back again as well, it became necessary to epithet this process with *vital imbibition*. I am disposed to think that however pretty *vital imbibition* sounds, it can not be regarded as a physiological endowment of any living structure. The terms transudation, exhalation, endosmosis, etc., are all well enough applied as descriptive or distinctive epithets, yet I think that terms like these are more correctly applied to vegetable chemistry than to essentially vital and physiological processes like secretion or the vital elimination of effete material. I can not but regard the liquor amnii as a secretion designed for the nutrition, but more for the protection of the enclosed fœtus. To regard an excessive quantity of this secretion as constituting amniotic dropsy, is just as philosophical and correct as to say a dropsy of the chest may be produced by an increase of the natural secretion of the pleural membrane. I must therefore regard dropsy of the amnion as I do dropsy of the pleura, as a disease *sui generis*, and that the former has a like pathology with that of the latter, both essentially dependent upon inflammation of the membrane itself.

[*To be continued.*]

EXTENSIVE INJURY OF THE HAND, WRIST, AND FOREARM, WITH COMPOUND DISLOCATION OF THE ELBOW, ETC.—AMPUTATION OF THE ARM.

By WM. P. RODEFER, M. D.,

Of New Market, Tenn., late Surgeon Q. M. D., U. S. A., in charge of Q. M. Hospital, Knoxville, Tenn.

The report of many cases occurring in practice, particularly those instances where some newly suggested plan of treatment has been attempted, always possesses a peculiar interest for the busy worker, not only on account of the freshness with which such cases come to him, but because their history serves to bring prominently before him principles and

plans which he may at no distant period be called upon to test in practice.

At about 9 o'clock in the morning of the 11th inst., I was hastily summoned to the residence of Mr. S., one mile west of the town of N. M., to see a patient who was represented to me by the messenger—who, himself, was too greatly excited to give me any intelligible information—as having had his whole arm torn off by its being caught by the cylinder of a threshing machine. Repairing to the place designated by the messenger, who came as a *second* runner "after the doctor," I found J. W., a man about thirty years of age, of fine physical conformation, and evidently of good general health, lying on the floor of a room into which he had been carried, in great pain, pale from the loss of blood, greatly exhausted, and laboring under severe shock. On examination of the patient, I found the right hand torn entirely away from the wrist, and missing; the bones of the carpus were fractured in various ways, and that portion of the radius from the wrist-joint up to within two inches of the head of the bone, also missing. There was a compound dislocation of the bones of the forearm, upwards and backwards, and fracture of the outer condyle of the humerus. The soft parts, including both the vessels and the nerves, were torn into mere dangling shreds from the wrist upward to a point more than two inches above the elbow. There was only slight hemorrhage at the time of my arrival, but as a precautionary measure, ligatures were placed on the radial and ulnar arteries, at once.

The history of the accident, as I obtained it from those individuals who witnessed it, was as follows: Mr. W. was passing around and to one side of the thresh-box of the machine, which was in rapid motion when he observed a portion of a bundle of grain which was being threshed out, lying on the platform of the thresher, having been thrown out. Having picked this up with his right hand, he reached over some distance for the purpose of returning it to the thresh-box, when his hand was caught by the rapidly revolving cylinder, and torn and crushed in the manner described.

At the expiration of half an hour the patient continued to suffer great pain, and as the symptoms of shock were still prominent, a second half grain of morphia with an ounce of brandy was given, and as there were no evidences of further hemorrhage, the limb was wrapped in a cloth wrung out of a solution of acetate of lead, and a roller applied over this, and time given for reaction to take place; the propriety of amputation having been determined on at once.

At about half-past one o'clock, P. M., I returned to the room of my patient, accompanied by my friends, Drs. Burnett, sr., and Jno. M. Pierce, who had kindly consented to assist me with the operation, and found him resting comfortably in every way, with reaction fairly established, but anxious, since it must be done, to have the limb removed. Every necessary preparation having been made, the patient was placed upon the table at once, and brought fully under the influence of chloroform, when I proceeded to perform amputation at the lower portion of the middle third of the humerus, by means of the antero-posterior flap method; Dr. Burnett administering chloroform and Dr. Pierce controlling the hæmorrhage and assisting in the ligation of arteries. The amputation was done very rapidly, and the vessels were secured with the loss of no blood worth mentioning. The surfaces of the flaps were then smeared with a mixture of carbolic acid and glycerine, one part of the former to seven parts of the latter, and the flaps were brought together by means of alternate sutures of silk thread and silver wire; a few narrow strips of adhesive plaster being applied to give additional support to the parts. A compress soaked in the mixture of carbolic acid and glycerine was placed over the end of the stump, and a light roller applied from the shoulder downward to the end of the limb. The arm was placed at rest in an easy position, and the bandage kept wet with cold water.

On visiting Mr. W. on the afternoon of the following day, I found him doing exceedingly well: he had slept well during the night with no pain whatever, and with the exception of a slight difficulty in getting his urine to *start* to flow, he complained of not a single untoward symptom, the stump evincing no signs of inflammation whatever, and the dressings being hardly soiled at a single spot. These latter were allowed to remain undisturbed. An aperient was ordered, and fifteen grains of the chloral hydrate were left for the night. This condition of things continued until the evening of the fifth day—the patient taking no medicine whatever except the chloral hydrate, which always secured to him a pleasant night

of sleep without the slightest disturbance in any way—at which time it was deemed advisable to change the dressings, more for the purpose of seeing the exact conditions existing in the stump than because of the existence of any necessity for such change.

On removing the compress which had been applied to the end of the stump, your readers can well imagine the surprise with which I was struck on looking at the beautiful appearance which the parts presented. There was no redness, heat, or swelling, nor any signs whatever of inflammation; and the flaps were beautifully united by the first intention in more than two-thirds of the extent of the wound, while the remaining portion around the point where the ligatures were brought out, was discharging a small quantity of healthy pus and gradually closing up. The sutures were every one intact, and looked as if they had just been introduced. This, too, from the 11th to the 16th of August—a period including three of the most intensely warm days of the present Summer! The compress was again soaked in the solution of carbolic acid and glycerine, and the parts were dressed in the same manner as before. An aperient was again required, and the chloral hydrate given at night.

On the morning of the day following the change of the dressings, the patient was seized with a severe diarrhœa of a dysenteric character, which continued for twenty-four hours with violence, leaving the man weak and prostrate; but which yielded promptly to large doses of gallic acid in combination with opium. Four days subsequent to this, imprudence in eating, gave rise to an equally severe attack of cholera morbus, which was very trying on the adhesions which had formed in the stump, owing to the violent strain on the whole of the muscular organization, produced by the severe and constant vomiting. The limb was dressed, however, immediately after the subsidence of the disease, and, with the exception of the giving way of two of the silk sutures, there was no injury whatever done to the parts. The flaps were still beautifully united throughout the greater portion of their extent, and the portion of the wound which was undergoing the granulating process was gradually contracting so as to leave but a small part to heal. The ligatures on the arteries were gradually becoming loose; and I presume they are by this time entirely detached. I feel confident that, with the separation of these, the granulating surface will very soon close up completely and leave a handsome stump.

The history of the progress of this case is certainly remarkable, when we consider the extreme heat of the season through which it has passed—the warmest by some degrees that we have experienced throughout the summer—and the success of the after treatment with the carbolic acid is surely sufficient to warrant a still further trial of the remedy. The experience of Dr. LENTE, as recorded in his article on "A New Method of Securing Divided Vessels, and the Use of Carbolic Acid in Surgical Operations for Facilitating Union by First Intention," (see *American Journal of Medical Sciences* for April, 1869,) was not so favorable to the use of the acid in its application to stumps, as to wounds caused by the removal of morbid growths, or by the occurrence of some accident. We cannot perceive why this should be the case; but as Dr. L. very properly observes, the cases which were subjected to test by him were almost altogether "very unfavorable for a successful trial" of the remedy, while the case which I have reported was in every way exceedingly favorable. I cannot close this article without adverting to two facts which I have observed in the use of the carbolic acid as an application to wounds, viz: The almost entire absence of flies from the parts, and the greater length of time required for the separation of ligatures from the vessels.

HOSPITAL REPORTS.

PHILADELPHIA HOSPITAL.

May 7th, 1870.

Clinical Service of F. F. MAURY, M. D.,

One of the Surgeons to the Philadelphia Hospital—Lecturer on Cutaneous and Venereal Diseases in the Jefferson Medical College, etc.

(REPORTED BY RALPH M. TOWNSEND, M. D.)

GENTLEMEN: In these clinics you most not look solely for venereal material. I have abundant surgical cases from which to select, and which I must incorporate in my clinics. It is particularly desirable that you shall see disease at its inception and follow its various stages, but there are times and cases when I shall have to commence in the middle of a disorder or else let the patient slip from both of us.

The first case which I bring to your notice to-day is a woman laboring under

Tertiary Syphilis.

She has a deep ulceration at the outer canthus of the right eye, which previously was of more magnitude than to-day. It now presents the appearance of a healthy ulcer which before was not the case. As I open the patient's mouth you see the hard and soft palate perforated, and the woman has to wear a plug. I call this a case of tertiary syphilis, because of the structures involved, viz: muscle, periosteum, and bone. In an affection like this, the surroundings, temperament, habit, treatment, etc., of the patient, all have to do with the severity of the disease. The cartilages of the lids here are intact as you can see when the woman winks her eye. This is because of the low vascular endowment of the cartilage, whereby it resists ulceration longer. This is fortunate, because the contour of the eye is preserved, and when the ulcer heals no disfigurement will result.

Treatment :—This sore was touched with the dilute acid nitrate of mercury, in the proportion of 1 to 8 or 10, every three, four, or five days, according to its action. The ulcer was first wiped with a piece of dry charpie or lint to rid it of the gray, tenacious lymph which stood in the way of medication, and consequently of granulation and healthy, reparative action. As a topical application, between the time of using the acid, the following ointment:

R.	Ung. hydrarg. nit.,	ʒss.	
	Pulv. rhei.	grs.xx.	
	Pulv. opii.	ʒss.	
	Cerat. simp.	ʒvi.	M.

The dilute acid, nitrate of mercury, was also applied to the ulcer on the soft palate. Always forbear the use of a plug until the inflammation is subdued, otherwise the plug will act as an irritant. The openings in these cases can be filled with either silver, gold, gutta-percha, or cork.

Internally we are giving this patient:

R.	Tinc. ferri. chlor.,	ʒv.
	Liq. potass. arsen.,	ʒiij.
	Hydrag. chlor. corros.,	gr.iss. M.

S.—Twenty-five drops three times daily in water.

Her own statement is that she is much improved, and feels altogether better during her treatment of the last week.

Roseola Maculata.

On the lower portion of the woman's leg now before you, you observe, even at a distance, dark, coppery spots, cracked and fissured. On the upper portion of the leg you observe the same spots, but without fissure. Now this is an erythematous eruption, and a case of profound syphilis. It is confined to the epithelial structures and does not attack the rete mucosum or any portion of the true skin. It is one of the most common varieties of skin affections, generally precedes papular eruptions, and is designated Roseola Maculata, or spotted redness.

Treatment :—Act upon the epithelial structures by hot water, medicated lotions and steam, the latter either alone or medicated. My attention was called to this woman ten days ago, when I prescribed for her Hepar sulphuris, potassii sulphuretum, or what is commonly known as Liver of sulphur. This substance is freely soluble in water, and I directed two teaspoonsful to be added to a basin of water, and the woman to wash herself with it immediately after taking a steam bath. And here let me explain to you a handy and efficacious way of giving a steam or vapor bath at the homes of your patients. Let the patient sit upon an ordinary cane seated chair, under which is a tin basin of water heated by a spirit or other lamp. Cover the patient first with a woolen blanket, fitting closely around the neck and dropping to the floor, and over this a voluminous gum-blanket, also tightly fitting around the neck and reaching to the floor. This prevents the escape of the steam as the water boils and, consequently, it exerts full action upon the skin. The bath should continue for fifteen or twenty minutes, followed by a sponging with cold water, and then the application of the medicated lotion or ointment.

The general condition of this woman is good, but she will bear five drops of Fowler's solution, and the one-sixteenth of a grain of the tincture, or corrosive chloride of mercury, three times daily, given in Huxham's tincture. Before dismissing this case, I will remark that the woman was admitted to the hospital suffering with a phagedenic chancre.

Keloid.

(The following case was exhibited at a former clinic.)

The case now before you is the most wonderful of its kind I have ever beheld. This negro is from North Carolina, and is twenty-eight years of age. He is of immense muscular development, and, save his affection, looks to be the embodiment of health. This immense tumor which encircles his neck, like an Elizabethan collar, is an affection of the skin, first accurately described by Alibert in 1810, and called keloid, from its fancied resemblance to a crab. This growth is hard, semi-elastic, and looks very much like an enlarged cicatrice resulting from a burn. The inhabitants of hot countries seem particularly prone to this affection. I remember assisting Professor Gross to operate upon a creole from the Bermudas, when this growth occurred on the ear, following the boring of the lobe of the ear so that rings might be worn. I have at this time a patient under my charge upon whom I have twice operated for this affection, a colored man, but each time the tumor has recurred. Burns and scalds are common causes of keloid. You see many of these morbid growths are scattered over the body of this man. Keloid, though rarely, if ever, degenerating into malignancy, is troublesome on account of its unvarying recurrence. When excised, it nearly al-

ways returns, and its second growth is generally worse than the first. This man's father had a similar affection, which the patient states disappeared spontaneously. (?) In consequence of prolonged pressure, part of this growth around the neck, has taken an ulcerative action, and you see the pus dropping upon the man's shoulder. A section of knife, and is of a dense, firm consistence, with little elasticity. Hardly any vessels are perceptible in its interior, but the surface of the growth is very vascular, so that if I would cut this man the hemorrhage would be tremendous.

There is no remedy but the knife or ecraseur. The intense disfigurement to which the affection

a keloid tumor, under the microscope, shows fibres intersecting each other in every possible direction, intercepting cells, or spaces occupied by plastic matter, of a softer nature. To the naked eye it presents a whitish, homogeneous aspect, or, if the man be very old, very much the appearance of an unripe pear or turnip. It creaks slightly under the subjects this man, to say nothing of its inconvenience, would warrant any feasible procedure to free him from the growth. But the subject demands more careful thought than I have yet had time to give it. In conclusion I would mention that this growth is of eight years duration.

[The accompanying drawings I sketched from the patient.—R. M. T.]

Medical Societies.

MEDICAL SOCIETY OF LEWIS COUNTY WEST VIRGINIA.

Pursuant to previous adjournment, the Medical Society of Lewis county met at the Hospital for the Insane, on Saturday, August 27th.

In the absence of Dr. Edmiston, Secretary, the President appointed Dr. Kunst Secretary *pro tem.*

Essayists for the evening being called upon, Dr. Camden responded by reading a full and well prepared article upon the subject of "Mercury as an Antiphlogistic and Cholagogue." The paper called forth considerable discussion, which was participated in by most of the members present. On motion the article was ordered to be filed with the papers of the society; permitting the doctor, however, to retain it for a time, to have published if he sees proper.

Verbal reports being solicited, Dr. McWhorter related an interesting case, entitled "Hysterical Insanity."

Drs. Camden and Jodon each referred to cases of spinal irritation.

Drs. Edmiston and McWhorter were appointed essayists for the next regular meeting.

On motion, a vote of thanks was tendered to Dr. R. Hills for permission to meet in the hospital, and for the exhibition by the microscope, of many interesting scientific and anatomical views.

On motion, the society adjourned until the last Saturday in October.

W. J. Bland, *President.*

A. H. Kunst, *Secretary.*

—— The old proverb says, "Every man is a physician or a fool at forty." Sir Harry Halford, a distinguished physician, happening to quote this old saw to a circle of friends, among whom was Canning, the latter inquired, "Sir Harry, mayn't he be both?"

EDITORIAL DEPARTMENT.

PERISCOPE.

Therapeutics of Chronic Constipation.

Dr. J. K. Splender, in a sensible paper in the *Med. Times and Gazette* on the treatment of constipation when it exists *per se* as a primary disorder of function, recommends the following judicious plan, which comprises four factors:—(*a.*) Minute and frequent doses of watery extract of aloes, not exceeding 1 gr.—very rarely, of extract of colocynth. (*b.*) A dose of sulphate of iron, gr. iss. to gr. ii., *always combined* with the aperient. (*c.*) Regulation of the diet. (*d.*) Constitutional exercise. He does not believe that any other drug can supply the place of the sulphate of iron, though belladonna may be occasionally useful as an auxiliary. At first he gives a pill, composed as above, three times a day, immediately after the principal meals, and gradually reduces the number and frequency of the pills as the intestinal functions are restored. The action is slow, requiring two, or perhaps three days, but *nothing approaching to purgation* ought ever to be permitted. As a substitute in certain cases, Mist. ferri co., with dec. aloes co., in corresponding doses, may be adopted.

Cancer of the Larynx.

Mons. Desormeaux, in an essay on cancer of the larynx, quoted in the *Boston Medical and Surgical Journal*, arrives at the following conclusions:

"1st. Cancerous tumors of the larynx, being generally, if not always, composed of epithelial tissue, which offers greater chances of cure than true cancerous growth, one should never hesitate to operate for their removal when entire extirpation appears possible.

"2d. The symptoms manifested, the progress of the disease, and especially examination by means of the laryngoscope, will enable us to reach an almost positive diagnosis; and, supposing even that there be an error in determining the nature of the morbid growth, the moment the tumor threatens suffocation to the patient, there is an indication to resort to an operation provided it be impossible to destroy the growth from above.

"3d. This operation is laryngotomy. We should not hesitate to freely open the parts, in order to attack the tumor with advantage and to effectually destroy it.

"4th. The danger in laryngotomy is slight. The fear of changing the voice, even of inducing complete aphonia, should not deter when the disease in question necessarily terminates fatally.

"5th. When the affection originates in the larynx, removal may be attempted whenever it has not extruded above the upper orifice, a point to be determined by the laryngoscope, and so long as it has not broken through the cartilaginous case which for a long time resists its inroads. This last stage of the disease is recognized by the increased size of the larynx, and by an irregularity of form and an abnormal firmness.

"6th. When these symptoms make it clear that complete extirpation is out of the question, or when the adjacent glands are enlarged, tracheotomy is the only resort, in order to avoid suffocation and to prolong the life of the patient.

"7th. After laryngotomy and the destruction of the tumor, a tube should be kept in the trachea long enough to make sure that there is no recurrence. The opening thus maintained allows free exploration of the larynx from below upward, and the cauterization of doubtful points; and, moreover, if the necessity for laryngotomy recurs, it simplifies the operation."

Inversion of the Uterus.

The New York *Medical Gazette* has the following:

Dr. W. H. BYFORD relates, in the *Chicago Medical Examiner*, a case of inversion of the uterus reduced by means of elastic pressure. The patient was a woman, æt. 22, in whom a third labor was followed by relaxation of the womb and much hæmorrhage. Affairs progressed favorably enough, however, until one day, about five weeks after the delivery, "while sitting on the vessel, vomiting, she experienced slight tenesmus, and felt something pass out between the labia." After some weeks of treatment by sitz-baths and astringent injections, she was seen by Dr. Byford, who found the uterus "about the ordinary size of the unimpregnated organ, and inverted, all but the vaginal portion of the cervix. The density of the anterior walls and cervix seemed rather less than natural." The mode of treatment adopted is thus described by the author:

After lifting up the uterus as much as I could with two fingers, I placed an elastic bag under it, so as to make pressure upward and slightly forward in the direction of its axis, and filled with tepid water, until the patient complained of severe, inconvenient pain from distention. She was directed to remain in bed, and the instrument was left in

place until the next day. The water was then allowed to flow out, and the parts examined. I could discover no change in the condition of the uterus. The bag was again filled, and the distention made as great as the patient could well bear. Upon emptying it again, on the third day, relaxation of the cervix was quite evident, and I felt encouraged to expect success. On the fourth day, the relaxation was so decided, that the fundus could be almost passed up into the os with the fingers. On the fifth day, when the water was again allowed to flow off, the uterus was found to have returned to its natural position. The patient was directed to remain in bed still, and the instrument removed from the vagina. On the sixth day I passed my probe through the os uteri, two and a quarter inches, showing that the fundus was thoroughly restored to its shape and position. The patient remained in bed for two days more, and then gradually resumed her exercise until, on the 22d of June, she attended the wedding of one her friends.

Neuralgia of the Jaw-bones.

Prof. GROSS, in *American Journal Medical Sciences, and American Practitioner*, says: "There is a form of neuralgia of the jaw-bones which, as far as my information extends, has not hitherto been described. Its seat is in the remnants of the alveolar process of edentulous persons, or in the alveolar structure, and in the overlying gum, and is met with chiefly, if not exclusively, in elderly subjects. It is more common in the upper than in the lower jaw. The part affected is usually very small, often not exceeding a few lines in extent. The soft tissues around do not seem to suffer, at least not in the same degree; on the contrary, the morbid action is generally limited to the osseous structure. In rare instances there may possibly be some involvement of the gum, which is nearly always exceedingly hard and dense, grating more or less under the knife, and adhering with extraordinary firmness to the atrophied alveolar process beneath. The pain is generally paroxysmal, coming on in fits and starts, very much as in ordinary neuralgia, the slightest causes being sufficient to provoke it, as talking, mastication, the contact of hot or cold fluids, deglutition, or mental excitement. Sometimes it is momentary, coming and going with the rapidity of lightning; occasionally it lasts for hours together; and cases occur, although they are rare, in which it continues, with but little mitigation, for an indefinite period. The pain varies in character; thus it may be sharp and darting, dull, heavy, aching, boring, or gnawing. Pressure generally relieves rather than aggravates it. Now and then, when it is uncommonly severe, there may be more or less spasm of the muscles of the face, but this is rare. The pathology of the affection seems to be compression of the minute nerves distributed through the wasted alveolar process, dependent upon the encroachment of osseous matter upon the walls of the canals in which they are naturally inclosed. The disease usually comes on gradually, and proceeds from bad to worse until, in many cases, the suffering is rendered nearly intolerable. The only effectual remedy is excision of the affected alveolar process. No particular attention need be bestowed upon the after-treatment. A mild course of chalybeate tonics may be required when the patient is anæmic, or affected with flatulence and indigestion."

On Galvano-Puncture of Nævus.

Dr. J. DUNCAN, (*Edinburgh Medical Journal,*) states that, having experienced the advantage of electrolysis in aneurism, especially of the cirsoid variety, he was encouraged to hope, from the resemblance between this and nævus, that it would prove equally successful in this affection also. He details six cases, of which the following is selected at random:

Case IV was a nævus of the upper lid, with the the skin completely involved. Two operations hardened the subcutaneous portion, which was thereafter largely absorbed. After two months, as it was again increasing, an operation was directed to the cure of the skin, which had not as yet been affected by the electrolysis. Its vitality was destroyed and a black slough separated almost without suppuration. A cicatrix remained, but did not interfere with the motions of the lid.

There can, he thinks, be no doubt that every nævus is curable by electrolysis, though many forms may be more quickly and conveniently cured by other means. To effect a cure, the electrolytic action must not, as in cirsoid aneurism, be limited to the occlusion of the main affluents, but must pervade the whole nævus, and act directly on almost every little vein. But electrolysis cauterizes the tissues as much as it coagulates the blood; and it is evident, accordingly, that when the skin is much affected, a slough will be produced. The slough is tough and dry, excites little irritation, is singularly slow to separate, and does so without a drop of hemorrhage, even though part of the nævus remains. It is therefore safe and effectual; but if a cicatrix must be left, there is reason for preferring the ligature as more safe and effectual. The galvanic apparatus is cumbrous, and in most cases the operation requires frequent repetition. On the other hand, he thinks this mode possesses many advantages in subcutaneous nævi beyond the reach of knife and ligature; and he gives an instance of one where the nævus so occupied the hand of a child (a year old) that the fingers protruded from the mass like the small roots from a turnip. In this a very successful re-

sult was obtained by galvano-puncture, a few hard nodules alone ultimately occupying the palm, and the motions of the hand remaining perfect. Again, those on the cheek and neck are well adapted for it. Granting patience on the part of the patient and surgeon, he thinks in such cases it is superior to injection, ligature, or excision. He uses Bunsen's battery, and has no fear of the development of gas, or its entrance into the circulation to any serious extent.

Pain after Operations.

The *Lancet* says, the narcotic effects of chloroform or ether destroy pain during operations, but many patients suffer severely after the narcotism has gone off. To prevent this, Prof. SÉDILLOT, of Strasburg, proposes to divide the tissues with the platinum wire brought to a white heat by the galvanic current. This division should be effected very slowly, so as to prevent hemorrhage. The author states that no pain is felt on awaking; that the wounds heal extremely well; and that hospital complications do not occur.

Reviews and Book Notices.

NOTES ON BOOKS.

WM. BALDWIN & Co., 434 Broome Street, New York, publish the *American Chemist*. It is issued monthly in quarto form. The third number—for September, 1870—contains forty pages of reading matter of special interest to chemists. There are many physicians who are particularly interested in chemical matters. To such we would commend this work. Such an enterprise is worthy of encouragement and support. The September number contains the commencement of a complete resumé of the proceedings of the 19th Meeting of the American Association for the Advancement of Science, held in Troy, N. Y., last month, with abstracts of all the papers—143 in all—read before that body.

The *Chemist* is edited by CHAS. CHANDLER, Ph. D., and W. H. CHANDLER. $5 per annum—$4 when taken with the REPORTER—single numbers, fifty cents.

BOOK NOTICES.

The Medical Herbarium.—A collection of dried samples of medicinal plants. By T. F. Allen, M. D. Part I. Folio: Henry W. Smith & Co., 107, 4th Avenue, New York, Publishers. Price, $2.00 per part.

The study of medical botany has been unduly neglected, partly owing to the disgrace into which the study of materia medica in general has fallen in our schools, partly to its intrinsic difficulty. The latter objection will be in a great measure removed by Dr. Allen's excellent herbarium, the first number of which is before us. It is to be issued in parts, each part containing ten specimens. Each specimen is securely mounted on thick, white paper, 11¼x16 inches. The appropriate name and synonyms of each plant are given, the region and kind of soil in which the plant may be found are stated, the time of flowering and the part used in medicine.

The specimens before us are very carefully chosen and beautifully mounted, and we hope the author will receive abundant encouragement in his useful undertaking.

A Treatise on the Theory and Practice of Obstetrics. By WM. H. BYFORD, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College; author of the Practice of Medicine and Surgery, applied to the Diseases and Accidents incident to Women, etc. pp. 457. New York: Wm. Wood & Co. 1870.

The first noticeable thing about this book is its small size, as compared with most other works on the same subject. This, it was the aim of the author, to accomplish. He says in his preface: "For many years the author has been convinced that a treatise much more concise than any of these [the ordinary text books on obstetrics] could be made to contain all the practical information necessary to guide the student and 'busy practitioner' in the acquirement and exercise of this important branch of our art." He has avoided extensive discussions of disputed points of doctrine, or copious and frequent quotations of authors as incompatible with conciseness and comprehensiveness. In order to avoid a repetition of authorities in the text, a list of those used in the work is given in the preface, which shows the extent to which our author has carried his researches. The work embraces the topics usually treated of in books on midwifery, including the accidents attendant on difficult labors, but avoiding all diseases and injuries peculiar to women, excepting those incident to the puerperal state.

On a somewhat cursory examination of the work we think that the author has succeeded very well in accomplishing his object. The science and art of obstetrics is clearly and concisely presented, while all seems to be said that is necessary for the ordinary routine of obstetric practice. Of course, the intelligent practitioner will never rely upon one authority, but will have his library supplied with various works on every branch of medicine. Dr. BYFORD'S work is well worthy of a place in the practical physician's library, and, if we mistake not, will be consulted more frequently than any similar work in his possession. The text is illustrated by 154 wood cuts, some of which, we are sorry to say, are rather coarse in their execution. This work, with the same author's "Medicine and Surgery of Woman," leave little to be desired on the subject on which they treat.

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SEPTEMBER 24, 1870.

S. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

☞ Medical Society and Clinical Reports, Notes and Observations, Foreign and Domestic Correspondence, News, etc., etc., of general medical interest, are respectfully solicited.

Articles of special importance, such especially as require original experimental research, analysis, or observation, will be liberally paid for.

☞ To insure publication, articles must be *practical, brief* as possible to do justice to the subject, and *carefully prepared*, so as to require little revision.

We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession.

The Proprietor and Editors disclaim all responsibility for statements made over the names of correspondents.

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MISTAKEN LIBERALITY.

Through the kindness of medical friends we have received two copies of the *Albany Argus* containing the following piece of information, headed "Liberality of the Albany Medical School":

"The Hon. Ira Harris delivered the opening address at the college yesterday morning. The address was able and interesting, and we were pleased to see many homœopathic physicians in attendance. Mr. Harris is a firm believer in and patron of homœopathy, and fills a chair in the college. It is indeed gratifying to know that the barriers which have hitherto divided the two schools of medicine are being removed, and to see our college taking the initiatory step towards such a desirable achievement. We believe this is the only allopathic medical institution in this country that possesses views sufficiently liberal to allow any of the chairs to be filled by men who firmly and practically believe in the homœopathic doctrine. It is also pleasant to know that several of the trustees of the college are firm believers in homœopathy."

We should like to inquire whether it is "pleasant" to the Professors of that Institution to know that the Trustees have these leanings. And it is not stepping outside the proper limits of our business to demand from the Professors that they explain to the medical public whether or not this "fraternization," as it is tenderly called, is to go on or not.

Let our position as scientific practitioners be distinctly understood. We do not consider any man or any physician disreputable for being an *honest* homœopathist any more than we should consider him disreputable for maintaining any other scientific fallacy, so long as he does it in good faith. But any "fraternization" between regular physicians and homœopathists is as impossible as an agreement in reference to astronomical facts between one who holds and one who denies the Copernican theory. We do not say which one is right, or which is wrong; we simply say that it is utterly impossible for both to be right, and therefore it is absurd to talk of "removing the barriers." Any man and any school which professes to teach or to practice on both "theories" is aiming to impose upon and to defraud the public.

If the Albany Medical College expects to retain a particle of respect from any intelligent man, it must haste to renounce utterly the fraternization and the liberality which the *Argus* attributes to it.

THE DUTY OF THE PHYSICIAN.

The duty of the physician is to his race; it is not limited by the confines of nations, the location of languages, the limits of sex, the

difference of color, the predispositions of societies, the prejudices of politics. Equally with the professed servant of Christ, and the typical Samaritan of the parable, he helps those whom all others despise.

Thus it is that in mighty wars, as that we see waging on the European continent, we witness surgeons attending alike to the wants of the wounded of both armies, extending alike to all the succor for which they stand in need. They do not ask whether it is friend or foe, French or Prussian, but at once see in the wounded man a subject for their utmost attention.

In this respect we may regard the Congress at Geneva, held in 1867, as one of the mile stones in the moral progress of the race. It marked an epoch when the wounded in battle were no longer regarded as enemies, even though but a moment before they had been arrayed in arms against us, but are looked upon solely as suffering members of our common brotherhood.

Truly, in achieving such a conquest as this over the most violent prejudices and the worst passions of humanity, the art of medicine can claim for itself a victory which the first modern General who instituted a medical staff in his army—the far-sighted and humane Gustavus Adolphus—little foresaw.

Active, practical benevolence, that exercise of virtue which most prominently characterizes the purest religion, finds its exemplars conspicuously in the members of our own profession. And looking abroad at our neighbors, and rightly estimating what it is they seak after with such restless energy, and often at such terrible costs, we may well have reason to congratulate ourselves that, though our life is monotonous, tedious, and laborious, we are doing in our humble way a labor that ranks with the highest.

Notes and Comments.

Freaks of Lightning.

Additional facts are published regarding the destructive lightning stroke at Kingston, N. Y. The first bolt that killed any one came at eight o'clock. Five persons were immediately slain and in the course of the following day five more died from the injuries they received at the time. Forty persons took shelter from the storm under a small willow tree. This tree was next struck, but at about four feet from the ground the lightning left it and killed three of the party, and stunned all. It at once leaped to a spot about fifty feet to the south, and killed two persons of another party. One of the most curious things about the whole affair was that only colored people were fatally injured. A white man who was in the crowd of forty was knocked twenty feet from where he was standing, and his umbrella was torn to strips, but he sustained no further injury. A boy standing near him had an India rubber ring on his finger with a small iron-shield riveted to it. The shield and rivet were melted and his shoes torn off, and yet he escaped with his life. The statement that the large circus tent was struck was a mistake, though all who were inside were more or less affected by the lightning, while wild beasts were terribly excited, and made most hideous yells and cries.

Correspondence.

DOMESTIC.

"Those Worms."

EDS. MED. AND SURG. REPORTER:

I am no self-appointed censor in general, and if I were, should probably confine my criticisms to noteworthy subjects. But temptation steals upon us unawares. Whether or not we agree with the cynical philosopher that mankind are "mostly fools," depends: but we must admit that mankind are sometimes very amusing.

Tape-worms there are, and pin-worms, and earth-worms, and other worms; there is a worm at one end of a ramrod; there is a worm, it is said, in the bud, and a worm that dieth not, and a worm in a dog's tongue. Hear what a distinguished authority says on the subject of worms:

"In most carnivora, the septum (linguæ) is complete. * * The lower margin of the septum is thickened, and in many species includes the long cylindrical fibrous body, representing the glossohyal, called 'lytta,' and in dogs, where it attains its largest size, 'the worm.'"—OWEN, *Comp. Anat. and Phys. Vert. iii.* 197

The same author adds, that "it may help, by its elasticity, and that of its sheath, in the act of lapping," but the relation, if any, between this anatomical structure and hydrophobia awaits demonstration.

I agree with you that "it is very evident that there is need of more information on the subject," and regret that I can give none on worms in dogs tails; but I have not yet investigated that kind of antero-posterior symmetry.

"Hoping that other medical men will plunge deeper into this matter," I remain truly yours,

ELLIOTT COUES.

Fort Macon, N. C., Sept. 12, 1870.

[We publish above one of several communications we have received about Dr. Lynch's letter. The belief that hydrophobia is essentially a disease of parasitic origin is by no means new, and though Dr. L.'s article was somewhat startling, we thought it worth while to give such seemingly direct evidence, even if it were but to illustrate the extension of a popular medical error. We were the more willing to do this as it is our opinion that the surgeons who would catch, hold, and operate on a mad dog are likely to be extremely scarce.—EDS.]

Spasm of the Stomach.

EDS. MED. AND SURG. REPORTER:

In your issue of May 14, 1870, I reported a case of the above named disease, and requested some of your readers to give me clearer views of it and its treatment. In the June 18th No. Dr. Edward Vanderpoel, of New York city, very kindly replied to my request, and stated that he considered my case one of neuralgia of the stomach, instead of spasm; he further gave the histories of some cases, and gave as his remedy the Liq. Pot. Arsenitis, in gtt. v—x ter die. In regard to my case, i. e., the case of Mrs. I., as reported in your May No., I desire to state that she is now in the enjoyment of excellent health. She has had but one attack since the date of my report. I gave her twenty more of the pills she had been using before. She has never required anything since; her bowels have continued in good condition, and digestion is excellent. She has regained her lost flesh, and says that she feels as well as she ever did in any period of her life.

I desire to give to strychnia and ferrum especially the credit of curing this case, although I believe its combination with the podophyllin, cinchona, and aloes made it more effective than if it had been prescribed alone.

The daughter of Mrs. I., a young lady of 17 years of age, has experienced several attacks similar to her mother's. I shall put her on the Liq. Pot. arsenitis, as suggested by Dr. Vanderpoel.

J. T. DAVIS.

Laconia, Ind., Sept. 7, 1870.

NEWS AND MISCELLANY.

Surgeons for the Prussian Army.

Forty-two surgeons have sailed from the port of New York for Europe to join the German army. Their fares, with two exceptions, were defrayed by the German Patriotic Aid Society of New York. Their names are: Aug. Henry Achenbach, Chas. Bennerscheidt, Francis Cambossy (formerly at the Charity Hospital; at his own expense), Philip Feldbausch (had gone from New York to Europe and joined the Prussian army as surgeon in the Prussian-Austrian war in 1866), Edward Grether, F. R. Knoche, F. C. Rau, Henry Woodville, of New York; Richard S. Dewey, James Ellet Graham, of Brooklyn; Gustavus Stamm, Westchester county; Horace Tracy, Albany, at his own expense; Matthias Cook, Utica; Chas. Proegher, Albion; Edw. Woodbury Avery, Clinton, Oneida co.; W. B. Trull, Boston, Mass.; Leopold Spier, Charles Oswald Stockmann, New Haven; F. Halves, Trenton; Randolph S. Hittel, Philadelphia; S. C. Ermentrout, J. M. Hoffman, Reading, Pa.; Manno W. Van Kunkel, Allentown, Pa.; H. F. C. Krumme, Ridgeway, Pa.; Carroll V. Frush, J. J. Reuss, A. Trego Shertzer, Baltimore; Otto Frankenberg, Columbus, Ohio; Otto Krakow, Julius Hilgard Tyndale, St. Louis; George W. Goodner, Chicago; Erwin Hense, Milwaukee; B. F. Kierulff, Marshalltown, Iowa; Paul Bohrdt, Hamilton, Canada; Aug. Wilhelm Deiderichs of the German steamer Weser, Frederich Mueller of the German steamer Hanover, Ludwig Severin of the German steamer Frankfort, Friedrich H. Vogel of the German steamer Leipzig, now in port at Baltimore, Md.

QUERIES AND REPLIES.

Dr. E. A., of Indiana.—The best splints in the market will cost you $25 a set, containing 44 pieces; suitable for all sorts of fractures. We will send them to you C. O. D. at your order.

Dr. O. P. L., of La.—Your request is attended to. *Gray's Anatomy*, latest edition, is $8. The transactions of the American Medical Association are not yet out.

MARRIED.

CLARK—RUTTER. At the Chesnut Level Manse, Pa., Sept. 8, 1870, by Rev. L. C. Rutter, R. J. Clark, M. D., of Noblestown, Allegheny co., Pa., and Ettie S. Wood, daughter of Rev. Finley C. Rutter, of the former place.

FLANNER—MORRISON. At the residence of the bride's uncle, Sept. 7th, by Rev. Wm. H. Munroe, Rector of Emmanuel P. E. Church of this city, Dr. Henry G. Flanner and Miss Emma D. Morrison, of Wilmington, N. C.

SALTAR—COLEMAN. At Grace Church, Pemberton, N. J., Sept. 15th, by Rev. M. F. Hyde, D. D., John Saltar, C. E., of Saratoga Springs, N. Y., to Sallie Pearson, elder daughter of the late L. P. Coleman, M. D., of Pemberton, N. J.

DIED.

DAVIS.—Dr. S. B. Davis, a well-known citizen of Memphis, Tenn., was drowned in Bluff Creek, Miss., recently, while attempting to swim across.

KING.—At Chelwood, Bucks co., Pa., Sept. 18th, Hannah Wharton, wife of Dr. Charles R. King.

SMITH.—In this city, Sept. 7th, after a lingering illness, Dr. Thomas W. Smith, formerly of Montgomery co., Pa.